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**From:** Whitson, Amelia [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=478092F049A74904ACAF85C742FA5ACD-AWHITSON]  
**Sent:** 11/2/2017 8:02:12 PM  
**To:** Goodwin, Cathleen@Waterboards [Cathleen.Goodwin@waterboards.ca.gov]  
**Subject:** RE: Request for acceptance of wastewater with low level radioactivity (Eureka)

Hi Cathy,

Here's the link I mentioned discussing radioactive materials in sewage sludge and ash at POTWs:

<https://www.epa.gov/sites/production/files/2015-05/documents/832-r-03-002b.pdf>

Again, please let me know if there's anything else you need. I hope that the City can get information about any relevant operating license issued by NRC.

Best,  
Amelia

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**From:** Goodwin, Cathleen@Waterboards [mailto:Cathleen.Goodwin@waterboards.ca.gov]  
**Sent:** Wednesday, November 1, 2017 10:35 AM  
**To:** Whitson, Amelia <Whitson.Amelia@epa.gov>  
**Subject:** Request for acceptance of wastewater with low level radioactivity (Eureka)

Amelia:

PG&E requested the City of Eureka to accept trucked waste with low level radioactivity that exceeds drinking water objectives. I responded to the City that Regional Water Board staff do not see this as an acceptable waste to accept. Clay Yerby asked me to explain. What are your thoughts about whether there is an acceptable level of radioactivity that the City can accept? Are levels below drinking water objectives acceptable?

Provisions in section VI.C.5.b.iv and v of the Order are included to prevent the acceptance of wastes that can't be adequately treated at the Facility. The Facility is not set up to treat radioactivity. Prohibition III.J states, "The discharge of any radiological, chemical, or biological warfare agent or high-level radioactive waste into waters of the state is prohibited." The word "any" is the operative word here. Even if the radiological waste is diluted to below current detection levels, it would be difficult to document that they didn't discharge any radiological waste to waters of the State. With these kinds of requirements, it seems most appropriate to require PG&E to dispose of its radioactive waste, no matter how low the radioactivity levels are, in a more appropriate way.

Thanks!  
Cathy

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**From:** Clay Yerby [mailto:cyerby@ci.eureka.ca.gov]  
**Sent:** Monday, October 23, 2017 2:58 PM  
**To:** Goodwin, Cathleen@Waterboards <Cathleen.Goodwin@waterboards.ca.gov>  
**Subject:** RE: Radioactivity

Hi Cathleen, we have informed PG&E of your determination. The question we still have is: What is a level of radioactivity that we can accept? Is the drinking water standard an appropriate gauge? If so, then the way I read it, a speciation test for beta results over 50 pc/L is the next step but I'm no expert on this topic and a little clarification would be appreciated.

Thanks,  
Clay Yerby

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**From:** Goodwin, Cathleen@Waterboards [<mailto:Cathleen.Goodwin@waterboards.ca.gov>]  
**Sent:** Friday, October 20, 2017 3:32 PM  
**To:** Clay Yerby <[cyerby@ci.eureka.ca.gov](mailto:cyerby@ci.eureka.ca.gov)>  
**Cc:** Michael P. Hansen <[mphansen@ci.eureka.ca.gov](mailto:mphansen@ci.eureka.ca.gov)>  
**Subject:** Re: Radioactivity

Hi Clay:

I intended to get back to you yesterday, but was assigned some tasks related to addressing water quality impacts of runoff from the fires.

I looked over the information you sent to me and discussed it with Charles Reed and Mona Dougherty. We don't believe this is an appropriate waste for the City to accept. PG&E will need to find an acceptable method to dispose of this wastewater and document the disposal method. Charles Reed pointed out the PG&E has done so in the past.

Thank You

Cathleen Goodwin

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**From:** Clay Yerby <[cyerby@ci.eureka.ca.gov](mailto:cyerby@ci.eureka.ca.gov)>  
**Sent:** Wednesday, October 18, 2017 3:27 PM  
**To:** Goodwin, Cathleen@Waterboards  
**Cc:** Michael P. Hansen  
**Subject:** Radioactivity

Hi Cathleen, as we discussed, we wrote a permit for PG&E to haul and discharge groundwater resulting from excavations for a PG&E Pipeline In-Line Inspection and Upgrade Project. One of the excavation sites is located within the decommissioned Humboldt Bay Nuclear Power Plant. The permit requires that the permittee sample and analyze for pollutants of concern and obtain our approval to discharge prior to hauling the water to our treatment plant. Because of the location, one of the constituents we required for this site was an analysis of radioactivity by EPA 900. The acceptable limit we established in the permit is "drinking water standard". This limit can be revised if appropriate. Currently, the permittee is holding the pumped groundwater in a "frac" tank awaiting approval to discharge.

I've attach the certificate of analysis for radioactivity and included a link to a State Board Groundwater Information Sheet, Radionuclides for reference. [www.waterboards.ca.gov/gama/docs/coc\\_radionuclides.pdf](http://www.waterboards.ca.gov/gama/docs/coc_radionuclides.pdf)

## GROUNDWATER INFORMATION SHEET Radionuclides

[www.waterboards.ca.gov](http://www.waterboards.ca.gov)

State Water Resources Control Board Division of Water Quality GAMA Program Revised February 2016 1 The purpose of this groundwater information sheet is to provide ...

We request that Regional Board Staff review the results of analysis and advise us as to whether we should approve discharge or if not, and if not, what our next step should be.

Thank you,

Clay Yerby

City of Eureka

Source Control

707-441-4362

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